



## DESCRIPTION

### Solid wire for welding 3%Ni steel

Wire rod designed for welding low-alloy steels with 3,5% Ni. Suitable for the construction of cryogenic plant and pipework in petrochemical industry and for general low temperature applications down to -70°C.

## SPECIFICATIONS

EN ISO 14341-B	G 57 P 7 M22 SN71	AWS A5.28	ER80S-Ni3
Shielding	M20, 21	Positions	PA, PB, PC, PD, PE, PF
Current	DC+	Packaging Type	Drums, B300, D200 and D100 spools.

## ASME QUALIFICATIONS

F-No (QW432)	5
A-No (QW442)	10

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.1	Tensile strength R <sub>m</sub> MPa	550	620
Mn	1	Yield strength R <sub>p0.2</sub> MPa	490	540
Ni	3.5	Elongation A (L <sub>0</sub> =5d <sub>0</sub> ) %	17	24
P	0.01	Impact Charpy ISO-V	27J @ -70°C	50J @ -70°C
S	0.01	Impact Charpy ISO-V	-	-
Mo	0.03	<b>WELDING PARAMETERS</b>		
Si	0.6		1.0 mm	1.2 mm
Cu	0.12	Ampere	100A - 220A	150A - 360A
		Voltage	18V - 28V	30V - 34V
		Packaging	Ø 0,8÷1,6mm	Ø 0,8÷1,6mm
		Packaging Type	Drums, B300, D200 and D100 spools.	Drums, B300, D200 and D100 spools.





# 3Ni

DESCRIPTION

CRYOGENIC STEELS

3Ni

## APPLICATION

These consumables are specifically designed for the welding of low-alloy steels containing 3.5% Ni. They are ideal for the construction of cryogenic plants, pipelines in the petrochemical industry, and for general applications requiring reliable performance at low temperatures, down to -80 °C. It is important to preheat according to the base material and the thickness of the piece to be welded. Although AWS (American Welding Society) specifications often require post-weld heat treatment (PWHT), many welds can be left in the "as-welded" state. The necessity for PWHT is generally determined by the relevant and applicable design codes.

## ALLOY TYPE

Nominally 3.5% Ni low alloy steels.

## MICROSTRUCTURE

In the as-welded condition the microstructure is ferritic with a component of acicular ferrite for optimum toughness.

## MATERIALS

Low temperature applications, fine-grained steels that contain up to 3.5% Nickel.

**ASTM:** A203 gr. D, E, F, A350 gr. LF3, A352 gr. LC3, A333 Gr. 3

**UNS:** K22103, K21703, J42015

